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IBM Technical Disclosure Bulletins

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**DATE:** Tuesday, September 14, 2004 [Printable Copy](#) [Create Case](#)

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		DB=USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
<u>L6</u>		L5 and (address near8 ((translat\$4 or conver\$4) near4 (further or again or another or an other or (physical adj2 physical))))	19	<u>L6</u>
<u>L5</u>		(((logical or virtual) adj2 address) near4 (translat\$4 or conver\$4))	2102	<u>L5</u>
		DB=PGPB,USPT; PLUR=YES; OP=OR		
<u>L4</u>		L2 and ((physical adj2 physical) near6 (translat\$4 or conver\$4))	11	<u>L4</u>
<u>L3</u>		L2 and ((table or TLB or cach\$4) near6 ((another or translat\$2 or conver\$3 or an other) adj2 address))	35	<u>L3</u>
<u>L2</u>		L1 and (address near8 ((translat\$4 or conver\$4) near4 (further or again or another or an other)))	95	<u>L2</u>
<u>L1</u>		(((logical or virtual) adj2 address) near4 (translat\$4 or conver\$4))	5337	<u>L1</u>

END OF SEARCH HISTORY



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- 1) Enter a single keyword, phrase, or Boolean expression.  
Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)
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Example: optical <and> (fiber <or> fibre) <in> ti
- 3) Limit the results by selecting Search Options.
- 4) Click Search. See [Search Examples](#)

```
((logical or virtual)
<near/2> address) <near/4>
(translat$ or conver$) and
(address <near/8> ((translat$
```

**Start Search** **Clear**

Note: This function returns plural and suffixed forms of the keyword(s).

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### Terms used

logical or virtual near/2 address near/4 translat or conver and address near/8 translat or conver near/4 further or again

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### 1 [Rearchitecting the UML infrastructure](#)

Colin Atkinson, Thomas Kühne

October 2002 **ACM Transactions on Modeling and Computer Simulation (TOMACS)**, Volume 12 Issue 4

Full text available:  [pdf\(328.78 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index term](#)

Metamodeling is one of the core foundations of computer-automated multiparadigm modeling. However, the form the required metamodeling approach should take and precisely what role metamodels should play. The describing some fundamental problems in the industry's leading metamodeling technology, the UML framework could be rearchitected to overcome these problems. Three main is ...

**Keywords:** Metamodeling, UML infrastructure, classification, classification dimensions, deep instantiation, s language

### 2 [A Survey of Techniques for Synchronization and Recovery in Decentralized Computer Systems](#)

Walter H. Kohler

June 1981 **ACM Computing Surveys (CSUR)**, Volume 13 Issue 2

Full text available:  [pdf\(3.33 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

### 3 [Coupling compiler-enabled and conventional memory accessing for energy efficiency](#)

Ráksit Ashok, Saurabh Chheda, Csaba Andras Moritz

May 2004 **ACM Transactions on Computer Systems (TOCS)**, Volume 22 Issue 2

Full text available:  [pdf\(1.41 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index term](#)

This article presents Cool-Mem, a family of memory system architectures that integrate conventional memo address translation, and compiler-enabled cache disambiguation techniques, to reduce energy consumption solutions provided in this article leverage on interlayer tradeoffs between architecture, compiler, and operat reduction by statically matching memory operations with energy-eff ...

**Keywords:** Energy efficiency, translation buffers, virtually addressed caches

### 4 [Performance of the VAX-11/780 translation buffer: simulation and measurement](#)

Douglas W. Clark, Joel S. Emer

February 1985 **ACM Transactions on Computer Systems (TOCS)**, Volume 3 Issue 1

Full text available:  [pdf\(2.36 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A virtual-address translation buffer (TB) is a hardware cache of recently used virtual-to-physical address m set of measurements and simulations of translation buffer performance in the VAX-11/780. Two different ha 11/780 computers, and translation buffer behavior was measured. Measurements were made under normal

reproducible synthetic time-sharing work loads. Reported measure ...

5 Notable computer networks

John S. Quarterman, Josiah C. Hoskins

October 1986 **Communications of the ACM**, Volume 29 Issue 10

Full text available:  pdf(4.66 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [rev](#)

Computer networks are becoming more numerous and more diverse. Collectively, they constitute a worldwi

6 Fast detection of communication patterns in distributed executions

Thomas Kunz, Michiel F. H. Seuren

November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collabor**

Full text available:  pdf(4.21 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index term](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time d understanding of the execution of the application. The visualization tool we use is Poet, an event tracer dev However, these diagrams are often very complex and do not provide the user with the desired overview of display repeated occurrences of non-trivial commun ...

7 Trunking of TDM and narrowband services over IP Networks

James Aweya

January 2003 **International Journal of Network Management**, Volume 13 Issue 1

Full text available:  pdf(418.58 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

The recent interest in IP as the vehicle for transporting TDM and narrowband services stems from the possi voice, video, and data, and the flexibility with which new services can be introduced. A key step in the evolu based environment is the 'graceful' interworking of the IP networks with the existing networks and services telephone network. A &I ...

8 Understanding and constructing shared spaces with mixed-reality boundaries

Steve Benford, Chris Greenhalgh, Gail Reynard, Chris Brown, Boriana Koleva

September 1998 **ACM Transactions on Computer-Human Interaction (TOCHI)**, Volume 5 Issue 3

Full text available:  pdf(2.50 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

We propose an approach to creating shared mixed realities based on the construction of transparent bound we introduce a taxonomy that classifies current approaches to shared spaces according to the three dimens spatiality. Second, we discuss our experience of staging a poetry performance simultaneously within real an complexities involved in establishing social in ...

**Keywords:** CSCW, augmented reality, collaborative virtual environments, media-spaces, mixed reality, sha reality

9 Parallel execution of prolog programs: a survey

Gopal Gupta, Enrico Pontelli, Khayri A.M. Ali, Mats Carlsson, Manuel V. Hermenegildo

July 2001 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 23 Issue

Full text available:  pdf(1.95 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

Since the early days of logic programming, researchers in the field realized the potential for exploitation of programs. Their high-level nature, the presence of nondeterminism, and their referential transparency, amo interesting candidates for obtaining speedups through parallel execution. At the same time, the fact that th frequently involve irregular computatio ...

**Keywords:** Automatic parallelization, constraint programming, logic programming, parallelism, prolog

10 Computing curricula 2001

September 2001 **Journal on Educational Resources in Computing (JERIC)**

Full text available:  pdf(613.63 KB)  html(2.78 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

## 11 Formalizing the safety of Java, the Java virtual machine, and Java card

Pieter H. Hartel, Luc Moreau

December 2001 **ACM Computing Surveys (CSUR)**, Volume 33 Issue 4

Full text available:  pdf(442.86 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

We review the existing literature on Java safety, emphasizing formal approaches, and the impact of Java on smartcards. The conclusion is that although a lot of good work has been done, a more concerted effort is needed to develop readable formal models of the whole of Java and its implementation. This is a formidable task but we believe and thence to achieve ITSEC level 6 or Common Criteria ...

**Keywords:** Common criteria, programming

## 12 Launching the new era

Kazuhiro Fuchi, Robert Kowalski, Koichi Furukawa, Kazunori Ueda, Ken Kahn, Takashi Chikayama, Evan Tick

March 1993 **Communications of the ACM**, Volume 36 Issue 3

Full text available:  pdf(3.45 MB)

Additional Information: [full citation](#), [references](#), [index terms](#), [review](#)

## 13 4.2BSD and 4.3BSD as examples of the UNIX system

John S. Quarterman, Abraham Silberschatz, James L. Peterson

December 1985 **ACM Computing Surveys (CSUR)**, Volume 17 Issue 4

Full text available:  pdf(4.07 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

This paper presents an in-depth examination of the 4.2 Berkeley Software Distribution, Virtual VAX-11 Version 7.2. It discusses the historical development of the UNIX system from its conception in 1969 until today, and describe the design and implementation of 4.2BSD. We then present the internal data structures and ...

## 14 Design of the Mneme persistent object store

J. Eliot B. Moss

April 1990 **ACM Transactions on Information Systems (TOIS)**, Volume 8 Issue 2

Full text available:  pdf(3.22 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

The Mneme project is an investigation of techniques for integrating programming language and database features. It focuses on cooperative, information-intensive tasks such as computer-aided software engineering. The project strategy is to use persistent programming languages. We report here on the Mneme persistent object store, a fundamental component of the Mneme system. Mneme stores objects ...

## 15 A structural view of the Cedar programming environment

Daniel C. Swinehart, Polle T. Zellweger, Richard J. Beach, Robert B. Hagmann

August 1986 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 8 Issue 4

Full text available:  pdf(6.32 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

This paper presents an overview of the Cedar programming environment, focusing on its overall structure—the way they are organized. Cedar supports the development of programs written in a single programming language. The purpose is to increase the productivity of programmers whose activities include experimental programming environments for a high-performance personal computer. T ...

## 16 Distributed file systems: concepts and examples

Eliezer Levy, Abraham Silberschatz

December 1990 **ACM Computing Surveys (CSUR)**, Volume 22 Issue 4

Full text available:  pdf(5.33 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [ind](#)

The purpose of a distributed file system (DFS) is to allow users of physically distributed computers to share a common file system. A typical configuration for a DFS is a collection of workstations and mainframes connected and implemented as part of the operating system of each of the connected computers. This paper establishes a structure and decentralization of both data and control ...

**17 Status report of the graphic standards planning committee**

Computer Graphics staff

August 1979 **ACM SIGGRAPH Computer Graphics**, Volume 13 Issue 3

Full text available:  pdf(15.01 MB)

Additional Information: [full citation](#), [references](#), [citations](#)

**18 Query evaluation techniques for large databases**

Goetz Graefe

June 1993

**ACM Computing Surveys (CSUR)**, Volume 25 Issue 2

Full text available:  pdf(9.37 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index](#)

Database management systems will continue to manage large data volumes. Thus, efficient algorithms for sequences will be required to provide acceptable performance. The advent of object-oriented and extensible problem. On the contrary, modern data models exacerbate the problem: In order to manipulate large sets of database systems manipulate simple records, query-processi ...

**Keywords:** complex query evaluation plans, dynamic query evaluation plans, extensible database systems, operator model of parallelization, parallel algorithms, relational database systems, set-matching algorithms

**19 Programming languages for distributed computing systems**

Henri E. Bal, Jennifer G. Steiner, Andrew S. Tanenbaum

September 1989 **ACM Computing Surveys (CSUR)**, Volume 21 Issue 3

Full text available:  pdf(6.50 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index](#)

When distributed systems first appeared, they were programmed in traditional sequential languages, usually for sending and receiving messages. As distributed applications became more commonplace and more satisfactory. Researchers all over the world began designing new programming languages specifically for im languages and their history, their underlying pr ...

**20 Architectures: A perspective on the future of massively parallel computing: fine-grain vs. coarse-grain**

Predrag T. Tomic

April 2004 **Proceedings of the first conference on computing frontiers on Computing frontiers**

Full text available:  pdf(277.49 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index](#)

Models, architectures and languages for *parallel computation* have been of utmost research interest in com decades. A great variety of parallel computation models has been proposed and studied, and different parallel some possible ways of harnessing parallelism and improving performance of the general purpose computers as *artificial neural networks* ( ...

**Keywords:** cellular automata, distributed systems, massively parallel computing, multiprocessor computer models

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